

**IN THE SPECIFICATION**

**Please enter the following changes to the Specification, which begin at page 2, paragraph 1, "Related Applications", lines 1-16 (entire paragraph), as follows:**

---

Q1 The present application is related to the subject matter of the following applications: serial no. 09/404,515 (Docket No. RR2510) entitled "Method and Apparatus for Providing a Mobile Switching Center Intranet Function: and filed September 23, 1999 and now U.S. Patent No. 6,473,097 dated October 29, 2002; serial no. 09/436,008 (Docket No. RR2341) entitled "Method and System for Providing an Integrated Functional Topology for Wireless and Wireline Communication Networks" and filed November 9, 1999; serial no. 09/406,317 (Docket No. RR2332) "Integration of ATM Edge Switch with Access Device" and filed September 27, 1999; and serial no. 09/414,181 (Docket No. RR2344) "Method and System for Next Generation Wireless Network Access Function" and filed October 7, 1999. The content of the above-referenced applications is incorporated herein by reference.

---

**Please enter the following changes to the Specification, which begin at page 12, line 1 and ends at page 12, line 32, as follows:**

---

Q2 **Figure 2** illustrates a block diagram of a functional topology **200** for an integrated wireless/wireline network, in accordance with a preferred embodiment of the present invention. The topology outlined in **Figure 2** includes specific functional entities. Voice Services Function **202**, which is a centralized network resource that provides voice processing functions, including announcements, bridges, voice recognition/authentication, and advanced services support. Voice Services Function **202** is linked to ATM fabric **216**, which underlies ATM Gateway **214**. By constructing the network out of broadband/ATM components, the network is capable of flexibly carrying payloads ranging from narrowband voice/data to broadband multimedia data. The topology depicted in **Figure 2**, includes an Element Manager Function **204**, also connected to ATM fabric **216**, that provides operations, administration, maintenance, and provisioning functions for the network. The element management architecture facilitates real-time management of resources required for call processing.

Q<sup>2</sup> The topology outlined in **Figure 2** additionally includes a Call Processing Function A 206, which provides service logic for supporting calls to and from the ATM fabric. Multiple call processing servers can exist in a given network. In **Figure 2**, for example, an additional call process function (i.e., Call Processing Function B 208) is also depicted. The topology outlined in **Figure 2** also includes a Mobility Manager Function 210, connected to ATM Fabric 216. Mobility Manager Function 210 provides HLR/VLR access as well as IS-41 messaging links. The acronym "HLR" represents the term "Home Location Register," a defined network entity. The HLR is a database of local subscriber data, including provisioning, service, and

---

**Please enter the following changes to the Specification, which begin at page 13, line 12 and end at page 13, line 31, as follows:**

---

Q<sup>3</sup> The topology 200 depicted in **Figure 2** additionally includes a Network Access Function 220 that consolidates traffic to and from access devices (e.g., base transceiver stations, digital loop carriers, and so forth), and interfaces these access devices with ATM Fabric 216. Other primary functions associated with Network Access Function 220 include signal processing, hand-off control, speech processing, data/voice interworking, and access to wireline communications networks (Public Switched Telephone Network (PSTN) and Public Data Network (PDN)). The communications network is inherently capable of supporting either wireless or wireline services (or both). Various access interface standards can be adapted at the edge of the network via Network Access Function 220, which is generally referred to as "NAF". Consequently, the infrastructure is capable of supporting any or all access standards, either alternatively or concurrently, which promotes the mixing of wireless and wireline access as well as incorporating multiple wireless and wireline standards.

---

**Please enter the following changes to the Specification, which begin at page 14, line 15 and ends at page 14, line 32, as follows:**

---

Q<sup>4</sup> Referring to **Figure 3**, a pictorial representation of a communications network in accordance with a preferred embodiment of the present invention is depicted. System 300 consists of multiple edge switches 301 that provide connection to ATM fabric 302 (see **Figure 2**

Q4 for details). Various cellular frequency modulation schemes (TDMA, CDMA and GSM) are connected to ATM fabric 302 via edge switches 301. Residential wideband data 304 may be transmitted to and from ATM fabric 302 via edge switch 301. Satellite 306 high speed transmission may be connected to the ATM fabric through edge switch 301 for transmission to households, cellular devices, etc. Local Multipoint Distribution System (LMDS) 309 is a method of distributing TV signals to households in a local area. In addition to receiving or transmitting TV signals via edge switch 301, LMDS is capable of handling voice and high speed data 308. Narrowband voice/data 310 is used to provide services such as paging, voice paging wireless data services.

---

**Please enter the following changes to the Specification, which begin at page 15, line 1, and end at page 15, line 25, as follows:**

---

Q5 Referring to **Figure 4**, a high-level block diagram of an ATM Gateway in accordance with a preferred embodiment of the present invention, is illustrated. ATM Gateway 400 is comprised of an edge switch subsystem with multiple functions integrated into the switch. Call Processing (CP) 402 provides the logic to process and direct incoming signals to the various Gateway functions. Access Interface Function (AIF) 404, Interworking Function (IWF) 406, Voice Processing Function (VPF) 408, is a centralized network resource that provides voice processing functions including bridges, announcements, voice recognition and authentication, and advanced services support. Signal Processing Function (SPF) 410, provides the logic and necessary conversion functions for converting incoming and outgoing signals. Digital Service Level Zero (DS-0) Function (DSF) 412, is utilized to digitize voice transmission using pulse code modulation. Element Management Function (EMF) 414, connected to the ATM fabric, provides operation, administration, maintenance and provisioning functions for the network. Asynchronous Transfer Mode Interface function (ATM) 416, provides the interface for the ATM fabric. Trunk interface function (TIF) 418, provides an interface between the ATM fabric, the edge switch and wireline circuits thus, integrating wireline and wireless communication networks.

---

**Please enter the following changes to the Specification, which begin at page 16, line 1 and end at page 16, line 29, as follows:**

---

transmitting device and the target receiving device may be a cellular telephone that utilizes CDMA or TDMA. The devices may also be wireless, or wireline, modems. The process proceeds to step 502, which illustrates a Base Station Controller (BSC) receiving the off hook signal. The BSC manages resources in GSM and includes Base Transceiver station. The process then passes to step 504, which depicts the signal received by the BSC being sent to an edge switch interface (in the present invention, BSC functions are integrated into the edge switch). The process continues to step 506, which illustrates the signal being passed to the ATM Gateway (see Figure 2).

Q6 Next, the process passes to step 508, which depicts the Call Processing function being initiated upon receiving the signal. The call processing function provides service logic for supporting calls (note that multiple call processing services can exist in a given communications network) and directs the incoming signal to the appropriate "translating" device contained within the edge switch. The signal, if necessary is converted to the target receiver protocol. The process then proceeds to step 510, which illustrates a determination of whether the target receiver is on the same BSC. If the target receiver is on the same BSC as the originating telephone, the process passes to step 512, which depicts the signal being routed to the APF (DEFINE) within the ATM Gateway. The process then moves to step 524, which illustrates the signal being transmitted by the BSC to the target receiver.

---

**Please enter the following changes to the Specification, which begin at page 17, line 1, and ends at page 17, line 16, as follows:**

---

Q7 instead to step 514, which illustrates the signal being passed to the ATM interface. The process then proceeds to step 516, which depicts the signal interfacing with the ATM fabric. The signal is transmitted on the ATM fabric to an edge switch that services the target device. The process continues to step 518, which illustrates the signal being received by the target edge switch (which is also an edge switch with an ATM gateway). The process then passes to step 520,

A? which depicts the Call Processing of the signal received by the AP function. The Call Processing function directs the signal to the proper protocol "translating" device, if necessary. The process then proceeds to step 522, which illustrates the proper device converting the signal to the targets protocol. Next the process passes to step 524, which depicts the converted signal transmitted to the target receiver.

---